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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,579	06/24/2005	Gilles Cavallucci	71247-0041	6435
22902	7590	12/04/2007		
CLARK & BRODY 1090 VERMONT AVENUE, NW SUITE 250 WASHINGTON, DC 20005			EXAMINER AKANBI, ISIAKA O	
			ART UNIT 2886	PAPER NUMBER
			MAIL DATE 12/04/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/540,579

Applicant(s)

CAVALLUCCI ET AL.

Examiner

Isiaka O. Akanbi

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Amendment*

The preliminary amendment filed on 18 September 2007 has been entered into this application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bures (5,220,409) in view of Fujioka et al. (2002/0033805 A1)

Regarding claims 1 and 13, Bures teaches of an optical detection method/device for determining the position of an object in a particular detection area of a surface (S)(fig. 6),

comprising a preliminary (i.e. period before penetrating/placing a stylus in an area) step of disposing in the vicinity of said detection area and on the same side thereof relative to the object (S) at least three elements including at least one emitter (LS) of light and at least one receiver (X25R/X30R) of light adapted to cover the detection area (44), each emitter being adapted to emit light in such a way that it does not hit said surface in the detection area (col. 1, line 65-col. 2, line 10), the method further comprises:

- a step during which one of said receiver (X25R) measures the quantity (i.e. a point of minimum signal reception or null or zero or shadow) (col. 6, lines 48-61) of light reflected by the object when the object is illuminated by one of said emitter for at least two different emitter - receiver pairs (col. 2, line 30-42), a step of calculating at least two characteristic values (i.e. x and y coordinates)(col. 3, line 23-43) from said measured values and a step of determining at least one position (i.e. location) of the object (S)(figs. 6 and 9)(col. 5, line 5-18)(col. 6, line 28-53).

Bures is silent regarding the limitation of a step of determining at least one position of the object by directly reading a table indexed by said at least two characteristic values, the content of said table being predetermined and set before said measurement step.

The use of a table indexed to determine at least one position of an object by directly reading a table indexed by at least two characteristic values (i.e. X and Y), the content of said table being predetermined and set before said measurement step is known in the art, as evidenced by Fujioka (figs. (9-15)(pars. 0047-0052)(see abstract).

Therefore it would have at least been obvious to one having ordinary skill in the art at the time of the invention was made to determine at least one position of the object by directly reading a table indexed by said at least two characteristic values, the content of said table being

predetermined and set before said measurement step for the purpose of locating the position of an object/stylus relative to coordinates on the screen with accuracy.

As to claims 2 and 14, Bures and Fujioka disclose everything claimed, as applied to claim 1 above, in addition Bures discloses wherein each emitter (LS) is associated with only one receiver (X1R to X25L) and said characteristic values (i.e. x and y) are equal to the values measured by each receiver when only said emitter is turned on (fig. 6)(col. 4, line 40-65)(col. 3, line 20-64).

As to claims 3-4 and 15-16, Bures discloses the preliminary step of emitters (LS) and receivers (X1R –X25r) that are disposed in an alternating and regular arrangement and a characteristic value is calculated for each emitter when only said emitter is turned on successively (figs. 6-8)(col. 6, line 28-col. 7, line 36).

Bures fails to specify that the characteristic value is calculated for each emitter by averaging the values measured by the receivers on each side of said emitter when only said emitter is turned on.

However calculating characteristic value/coordinate value by averaging the values measured by the receivers on each side of said emitter when only said emitter is turned on is known in the art, as evidenced by Fujioka (pars. 0050 and 0053).

Therefore it would have at least been obvious to one having ordinary skill in the art at the time of the invention was made to determine at least one position of the object by calculating characteristic value/coordinate value by averaging the values measured by the receivers on each side of said emitter when only said emitter is turned on for the purpose of locating the position of an object/stylus relative to coordinates on the screen with accuracy.

As to claims 5 and 17, Bures further discloses emitters and the receivers being disposed in any manner (figs. 2 and 6-10), the processor/computer (10)(fig. 1) means capable of calculate

a characteristic value (i.e. X and y values) for each emitter (LB) by calculating a function of the values measured by at least three receivers (10L-30L/X20R-X25R) when only that emitter is turned on, the coefficients of this affine function being a function of the distance between each receiver and that emitter (co. 4, line 10-65)(col. 6, line 28-61).

As to claims 6 and 18, Bures also discloses a processor means (10)(fig. 1) that is capable of repeating said measurement step for each of said emitter and receiver pairs (fig. 6) until a stable/location quantity of reflected light is measured (fig. 11)(col. 8, line 64-68).

As to claims 7 and 19, even though Bures when modified by Fujioka is silent regarding said predetermined table is obtained by a polynomial regression method from a number of preliminary measurements effected under the same conditions as apply to said measurement, Bures discloses a processor/computer (10)(fig. 1) means that is capable of using algorithm (i.e. polynomial regression) to obtain a number of preliminary measurements effected under the same conditions as apply to measurement.

Therefore it would have at least been obvious to one having ordinary skill in the art at the time of the invention was made to use any algorithm (i.e. polynomial regression) as desire to determine/obtained a number of preliminary measurements effected under the same conditions to form a table for the purpose of locating the position of an object/stylus relative to coordinates on the screen with accuracy.

As to claims 8 and 20, Bures further discloses a surface (i.e. screen) that is substantially plane, and wherein, during said preliminary step, there are disposed in a single line emitters (LS/LB) and receivers (X30L-X30R) of light having an emission axis, respectively a reception axis, substantially parallel to said particular detection area (fig. 6).

As to claims 9 and 21, Bures also discloses a detection area (S) that is rectangular and the emitters (LS) and receivers (X30L-X30R) are disposed in the vicinity of only one side of said rectangular area (fig. 6).

As to claims 10-11, 22-23 and 27, Bures fails to specify that the light emitted by the light emitters is ordinary non-coherent light and the wavelength of the light emitted is in one of the following ranges of wavelengths (i.e. UV, visible, infrared)

However, since Bures does not limit the type of source to be used and the range of the wavelengths and discloses a detection device (32) to detect the displacement of an object (S) (fig. 6)(col. 6, line 58-61), it would have at least been obvious to one having ordinary skill in the art at the time of the invention was made to use any type of light source (i.e. ordinary non-coherent light) with specified wavelength (i.e. UV, visible, infrared) as desired, since the method as disclosed by Bures works just as well with any light source with specified wavelength.

As to claims 12 and 24, Bures further discloses a set of elementary areas (X30L-X30R) each associated with a given function (i.e. of detecting/indicating penetration of the area) so that any position of the object in an elementary area activates the function associated with that elementary area (fig. 6)(col. 6, line 58-61).

As to claims 25 and 26, Bures when modified by Fujioka is silent regarding said particular area corresponds to an input area (i.e. data input terminal) and each of the elementary areas corresponds to a key.

However the applicant acknowledged (page 1, pars. 5-9) that this is known. Therefore it would have been at least obvious to one having ordinary skill in the art at the time of the invention was made to design/provide a device to meet the terms of the claims for the purpose of designing a keypad, since it is a conventionally known way of designing a touch screen keypad.

### ***Response to Arguments***

Applicant's arguments/remarks, see pages 1-5, filed on 18 September 2007, with respect to the rejection(s) of claim(s) 1-27 under 35 U.S.C. 103(a) have been fully considered but are not persuasive.

In response to Applicant's arguments that cited reference Bures does not teach the method of claim 1 or the optical detection device of claim 13, and in particular "a step during which one of said receivers measures the quantity of light reflected by the object when the object is illuminated by one of said emitters for at least two different emitter-receiver pairs" as recited in claim, it is respectfully pointed out to applicant that this argument is not persuasive as Bures clearly disclose in (col. 2, line 30-42) (col. 6, lines 48-61) (i.e. a point of minimum signal reception or null or zero or shadow) and shows in (figs. 6 and 9) these limitations.

Further, Applicant argues that the cited reference Bures does not teach the reflecting aspect of claims 1 and 13. However this argument is not persuasive since as clearly disclosed and shown in detail above these limitations.

Finally, in response to applicant's arguments with respect to the rejection(s) of claim(s) under 35 U.S.C. 103(a) in view of Fuioka, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). As such, the claims are still rejected as shown in the detail above.



***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

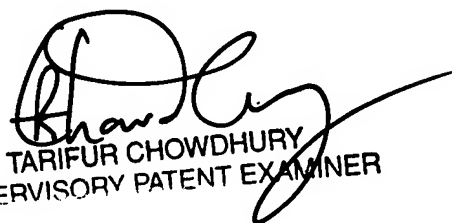
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on (571) 272-2287. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2886

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi

December 1, 2007

  
TARIFUR CHOWDHURY  
SUPERVISORY PATENT EXAMINER